### **RAW SEQUENCE LISTING**

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number:

Source:

1

Date Processed by STIC:

ENTERED

### CRF Errors Edited by the STIC Systems Branch

Serial :	Number: 10/578/590	CRF Edit Date: 5220 Edited by: 100
	Realigned nucleic acid/amino acid numbers/text text "wrapped" to the next line	in cases where the sequence
	Corrected the SEQ ID NO. Sequence numbers e	edited were:
	Inserted or corrected a nucleic number at the en NO's edited:	d of a nucleic line. SEQ ID
<u>/</u>	Deleted: invalid beginning/end-of-file text;	page numbers
<del></del>	Inserted mandatory headings/numeric identifier	s, specifically:
<del></del>	Moved responses to same line as heading/numer	ic identifier, specifically:
	Other:	



**IFWP** 

RAW SEQUENCE LISTING DATE: 05/22/2006
PATENT APPLICATION: US/10/578,590 TIME: 09:51:11

Input Set : A:\PTO.KD.txt

```
4 <110> APPLICANT: Hurst, Deborah
             Long, Li
      6
              Luqman, Mohammad
      7
              Lopes de Menezes, Daniel E.
              Yabannavar, Asha
      8
      9
              Zaror, Isabel
     11 <120> TITLE OF INVENTION: Methods of Therapy for Cancers
             Expressing the CD40 Antigen
     14 <130> FILE REFERENCE: PP23220.001 (281250)
C--> 16 <140> CURRENT APPLICATION NUMBER: US/10/578,590
C--> 16 <141> CURRENT FILING DATE: 2006-05-03
     16 <150> PRIOR APPLICATION NUMBER: 60/565,710
     17 <151> PRIOR FILING DATE: 2004-04-27
     19 <150> PRIOR APPLICATION NUMBER: 60/525,579
     20 <151> PRIOR FILING DATE: 2003-11-26
     22 <150> PRIOR APPLICATION NUMBER: 60/517,337
     23 <151> PRIOR FILING DATE: 2003-11-04
     25 <160> NUMBER OF SEQ ID NOS: 18
     27 <170> SOFTWARE: FastSEQ for Windows Version 4.0
     29 <210> SEQ ID NO: 1
     30 <211> LENGTH: 720
     31 <212> TYPE: DNA
     32 <213> ORGANISM: Artificial Sequence
     34 <220> FEATURE:
     35 <223> OTHER INFORMATION: Coding sequence for light chain of CHIR-12.12
             human anti-CD40 antibody
W--> 39 <221> NAME/KEY: CDS
     40 <222> LOCATION: (1)...(720)
W--> 42 < 400 > 1
     43 atg gcg ctc cct gct cag ctc ctg ggg ctg cta atg ctc tgg gtc tct
                                                                           48
     44 Met Ala Leu Pro Ala Gln Leu Leu Gly Leu Leu Met Leu Trp Val Ser
     47 gga tcc agt ggg gat att gtg atg act cag tct cca ctc tcc ctg acc
                                                                           96
     48 Gly Ser Ser Gly Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Thr
     51 gtc acc cct gga gag ccg gcc tcc atc tcc tgc agg tcc agt cag agc
                                                                           144
     52 Val Thr Pro Gly Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser
                 35
     55 ctc ctg tat agt aat gga tac aac tat ttg gat tgg tac ctg cag aag
     56 Leu Leu Tyr Ser Asn Gly Tyr Asn Tyr Leu Asp Trp Tyr Leu Gln Lys
                                 55
     59 cca ggg cag tct cca cag gtc ctg atc tct ttg ggt tct aat cgg gcc
                                                                           240
     60 Pro Gly Gln Ser Pro Gln Val Leu Ile Ser Leu Gly Ser Asn Arg Ala
```

Input Set : A:\PTO.KD.txt

```
61 65
63 tcc ggg gtc cct gac agg ttc agt ggc agt gga tca ggc aca gat ttt
64 Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe
                    85
67 aca ctg aaa atc agc aga gtg gag gct gag gat gtt ggg gtt tat tac
68 Thr Leu Lys Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr
               100
                                   105
71 tgc atg caa gct cga caa act cca ttc act ttc qqc cct qqq acc aaa
72 Cys Met Gln Ala Arg Gln Thr Pro Phe Thr Phe Gly Pro Gly Thr Lys
73
           115
                               120
75 gtg gat atc aga cga act gtg gct gca cca tct gtc ttc atc ttc ccg
                                                                      432
76 Val Asp Ile Arg Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro
                           135
79 cca tct gat gag cag ttg aaa tct gga act gcc tct gtt gtg tgc ctg
                                                                      480
80 Pro Ser Asp Glu Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu
                       150
                                           155
83 ctg aat aac ttc tat ccc aga gag gcc aaa gta cag tgg aag gtg gat
                                                                      528
84 Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp
                   165
                                       170
87 aac gcc ctc caa tcg ggt aac tcc cag gag agt gtc aca gag cag gac
                                                                      576
88 Asn Ala Leu Gln Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp
               180
                                   185
91 age aag gac age ace tac age etc age age ace etg acg etg age aaa
92 Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys
93
           195
                               200
95 gca gac tac gag aaa cac aaa gtc tac gcc tgc gaa gtc acc cat cag
                                                                      672
96 Ala Asp Tyr Glu Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln
                           215
99 ggc ctg agc tcg ccc gtc aca aag agc ttc aac agg gga gag tgt tag
                                                                      720
100 Gly Leu Ser Ser Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys *
                        230
105 <210> SEO ID NO: 2
106 <211> LENGTH: 239
107 <212> TYPE: PRT
108 <213> ORGANISM: Artificial Sequence
110 <220> FEATURE:
111 <223> OTHER INFORMATION: Light chain of CHIR-12.12 human anti-CD40 antibody
113 <400> SEQUENCE: 2
114 Met Ala Leu Pro Ala Gln Leu Leu Gly Leu Leu Met Leu Trp Val Ser
115 1
                                        10
116 Gly Ser Ser Gly Asp Ile Val Met Thr Gln Ser Pro Leu Ser Leu Thr
                                    25
118 Val Thr Pro Gly Glu Pro Ala Ser Ile Ser Cys Arg Ser Ser Gln Ser
120 Leu Leu Tyr Ser Asn Gly Tyr Asn Tyr Leu Asp Trp Tyr Leu Gln Lys
122 Pro Gly Gln Ser Pro Gln Val Leu Ile Ser Leu Gly Ser Asn Arg Ala
                        70
                                            75
124 Ser Gly Val Pro Asp Arg Phe Ser Gly Ser Gly Ser Gly Thr Asp Phe
```

Input Set : A:\PTO.KD.txt

```
125
                                        90
126 Thr Leu Lys Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr
                100
                                    105
128 Cys Met Gln Ala Arg Gln Thr Pro Phe Thr Phe Gly Pro Gly Thr Lys
                                120
130 Val Asp Ile Arg Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro
        130
                            135
132 Pro Ser Asp Glu Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu
134 Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp
135
                    165
                                        170
136 Asn Ala Leu Gln Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp
                180
                                    185
138 Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys
           195
                                200
                                                     205
140 Ala Asp Tyr Glu Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln
                            215
142 Gly Leu Ser Ser Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
143 225
                        230
                                            235
146 <210> SEQ ID NO: 3
147 <211> LENGTH: 2016
148 <212> TYPE: DNA
149 <213> ORGANISM: Artificial Sequence
151 <220> FEATURE:
152 <223> OTHER INFORMATION: Coding sequence for heavy chain of CHIR-12.12
          human anti-CD40 antibody (with introns)
153
156 <400> SEQUENCE: 3
157 atggagtttg ggctgagctg ggttttcctt gttgctattt taagaggtgt ccagtgtcag 60
158 gtgcagttgg tggagtctgg gggaggcgtg gtccagcctg ggaggtccct gagactctcc 120
159 tqtqcaqcct ctqqattcac cttcaqtaqc tatqqcatqc actqqqtccq ccagqctcca 180
160 ggcaaggggc tggagtgggt ggcagttata tcatatgagg aaagtaatag ataccatgca 240
161 gacteegtga agggeegatt caccatetee agagacaatt ceaagateae getgtatetg 300
162 caaatgaaca gcctcagaac tgaggacacg gctgtgtatt actgtgcgag agatgggggt 360
163 atagcagcac ctgggcctga ctactggggc cagggaaccc tggtcaccgt ctcctcagca 420
164 agtaccaagg gcccatccgt cttccccctg gcgcccgcta gcaagagcac ctctgggggc 480
165 acageggeee tgggetgeet ggteaaggae taetteeeeg aaceggtgae ggtgtegtgg 540
166 aactcaggeg cectgaccag eggegtgeac acetteeegg etgteetaea gteetcagga 600
167 ctctactccc tcagcagcgt ggtgaccgtg ccctccagca gcttgggcac ccagacctac 660
168 atctgcaacg tgaatcacaa gcccagcaac accaaggtgg acaagagagt tggtgagagg 720
169 ccagcacagg gagggagggt gtctgctgga agccaggctc agcgctcctg cctggacgca 780
170 teceggetat geagteerag teragggeag caaggeagge eeegtetgee tetteaeeeg 840
171 gaggcetetg eeegeeecae teatgeteag ggagagggte ttetggettt tteeceagge 900
172 totgggcagg cacaggetag gtgcccctaa cccaggccct gcacacaaag gggcaggtgc 960
173 tgggctcaga cctgccaaga gccatatccg ggaggaccct gccctgacc taagcccacc 1020
174 ccaaaggcca aactetecae teeetcaget eggacaeett eteteeteec agatteeagt 1080
175 aactcccaat cttctctctg cagagcccaa atcttgtgac aaaactcaca catgcccacc 1140
176 gtgcccaggt aagccagccc aggcctcgcc ctccagctca aggcgggaca ggtgccctag 1200
177 agtagcetge atceagggae aggeeceage egggtgetga caegteeace tecatetett 1260
178 cctcagcacc tqaactcctq qqqgqaccqt cagtcttcct cttcccccca aaacccaagg 1320
```

Input Set : A:\PTO.KD.txt

```
179 acacceteat gateteeegg acceetgagg teacatgegt ggtggtggae gtgageeaeg 1380
180 aagaccetga ggteaagtte aactggtaeg tggaeggegt ggaggtgeat aatgeeaaga 1440
181 caaagccgcg ggaggagcag tacaacagca cgtaccgtgt ggtcagcgtc ctcaccgtcc 1500
182 tgcaccagga ctggctgaat ggcaaggagt acaagtgcaa ggtctccaac aaagccctcc 1560
183 cagcccccat cgagaaaacc atctccaaag ccaaaggtgg gacccgtggg gtgcgagggc 1620
184 cacatggaca gaggeegget eggeecacce tetgeeetga gagtgacege tgtaceaace 1680
185 tetgteeeta cagggeagee eegagaacea eaggtgtaca eeetgeeeee ateeegggag 1740
186 gagatgacca agaaccaggt cagcctgacc tgcctggtca aaggcttcta tcccagcgac 1800
187 atcgccgtgg agtgggagag caatgggcag ccggagaaca actacaagac cacgcctccc 1860
188 gtgctggact ccgacggctc cttcttcctc tatagcaagc tcaccgtgga caagagcagg 1920
189 tggcagcagg ggaacgtctt ctcatgctcc gtgatgcatg aggctctgca caaccactac 1980
190 acgcagaaga gcctctccct gtctccgggt aaatga
192 <210> SEO ID NO: 4
193 <211> LENGTH: 469
194 <212> TYPE: PRT
195 <213> ORGANISM: Artificial Sequence
197 <220> FEATURE:
198 <223> OTHER INFORMATION: Heavy chain of CHIR-12.12 human anti-CD40 antibody
200 <400> SEQUENCE: 4
201 Met Glu Phe Gly Leu Ser Trp Val Phe Leu Val Ala Ile Leu Arg Gly
203 Val Gln Cys Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln
204
205 Pro Gly Arg Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe
206
            35
207 Ser Ser Tyr Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu
                            55
209 Glu Trp Val Ala Val Ile Ser Tyr Glu Glu Ser Asn Arg Tyr His Ala
211 Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Ile
                    85
                                        90
213 Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Thr Glu Asp Thr Ala Val
                100
                                    105
215 Tyr Tyr Cys Ala Arg Asp Gly Gly Ile Ala Ala Pro Gly Pro Asp Tyr
           115
                                120
217 Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ser Ala Ser Thr Lys Gly
                            135
219 Pro Ser Val Phe Pro Leu Ala Pro Ala Ser Lys Ser Thr Ser Gly Gly
                                            155
221 Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro Val
222
                    165
                                        170
223 Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr Phe
                                    185
225 Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val Val
           195
                                200
                                                     205
227 Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn Val
       210
                            215
229 Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys Arg Val Glu Pro Lys
230 225
                        230
                                            235
                                                                 240
```

Input Set : A:\PTO.KD.txt

Output Set: N:\CRF4\05222006\J578590.raw

231 Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu Leu 245 250 233 Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr 260 265 235 Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val 280 237 Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly Val 295 239 Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn Ser 310 315 241 Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu 325 330 243 Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro Ala 340 345 245 Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro 246 355 247 Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn Gln 370 375 380 249 Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala 390 395 251 Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr 405 410 253 Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys Leu 255 Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys Ser 435 440 257 Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser 450 455 259 Leu Ser Pro Gly Lys 260 465 263 <210> SEQ ID NO: 5 264 <211> LENGTH: 469 265 <212> TYPE: PRT 266 <213> ORGANISM: Artificial Sequence 268 <220> FEATURE: 269 <223> OTHER INFORMATION: Heavy chain of variant of CHIR-12.12 human anti-CD40 antibody 273 <400> SEQUENCE: 5 274 Met Glu Phe Gly Leu Ser Trp Val Phe Leu Val Ala Ile Leu Arg Gly 276 Val Gln Cys Gln Val Gln Leu Val Glu Ser Gly Gly Gly Val Val Gln 25 278 Pro Gly Arg Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Thr Phe 280 Ser Ser Tyr Gly Met His Trp Val Arg Gln Ala Pro Gly Lys Gly Leu 55 282 Glu Trp Val Ala Val Ile Ser Tyr Glu Glu Ser Asn Arg Tyr His Ala 284 Asp Ser Val Lys Gly Arg Phe Thr Ile Ser Arg Asp Asn Ser Lys Ile

### VERIFICATION SUMMARY DATE: 05/22/2006 PATENT APPLICATION: US/10/578,590 TIME: 09:51:12

Input Set : A:\PTO.KD.txt

Output Set: N:\CRF4\05222006\J578590.raw

L:16 M:270 C: Current Application Number differs, Replaced Current Application No L:16 M:271 C: Current Filing Date differs, Replaced Current Filing Date L:39 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order! L:42 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:1 L:534 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:9 L:635 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:11 L:766 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:13 L:849 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:15 L:921 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order! L:924 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:17

## Raw Sequence Listing before editing (for reference only)



**IFWP** 

RAW SEQUENCE LISTING DATE: 05/17/2006
PATENT APPLICATION: US/10/578,590 TIME: 10:16:54

Input Set : A:\sequence listing.txt
Output Set: N:\CRF4\05172006\J578590.raw

```
4 <110> APPLICANT: Hurst, Deborah
      5
             Long, Li
      6
              Luqman, Mohammad
      7
              Lopes de Menezes, Daniel E.
              Yabannavar, Asha
      9
              Zaror, Isabel
     11 <120> TITLE OF INVENTION: Methods of Therapy for Cancers
              Expressing the CD40 Antigen
     14 <130> FILE REFERENCE: PP23220.001 (281250)
C--> 16 <140> CURRENT APPLICATION NUMBER: US/10/578,590
C--> 16 <141> CURRENT FILING DATE: 2006-05-03
     16 <150> PRIOR APPLICATION NUMBER: 60/565,710
     17 <151> PRIOR FILING DATE: 2004-04-27
     19 <150> PRIOR APPLICATION NUMBER: 60/525,579
     20 <151> PRIOR FILING DATE: 2003-11-26
     22 <150> PRIOR APPLICATION NUMBER: 60/517,337
     23 <151> PRIOR FILING DATE: 2003-11-04
     25 <160> NUMBER OF SEQ ID NOS: 18
     27 <170> SOFTWARE: FastSEQ for Windows Version 4.0
```

# Pass Not Camply Corrected Distante Meaded P4.2

#### ERRORED SEQUENCES

962 <210> SEQ ID NO: 18 963 <211> LENGTH: 132 964 <212> TYPE: PRT 965 <213> ORGANISM: Artificial Sequence 967 <220> FEATURE: 968 <223> OTHER INFORMATION: des-alanyl 1, C125S human IL-2 mutein 970 <400> SEOUENCE: 18 971 Pro Thr Ser Ser Ser Thr Lys Lys Thr Gln Leu Gln Leu Glu His Leu 972 1 5 973 Leu Leu Asp Leu Gln Met Ile Leu Asn Gly Ile Asn Asn Tyr Lys Asn 20 975 Pro Lys Leu Thr Arg Met Leu Thr Phe Lys Phe Tyr Met Pro Lys Lys 976 977 Ala Thr Glu Leu Lys His Leu Gln Cys Leu Glu Glu Glu Leu Lys Pro 979 Leu Glu Glu Val Leu Asn Leu Ala Gln Ser Lys Asn Phe His Leu Arg 70 75 981 Pro Arg Asp Leu Ile Ser Asn Ile Asn Val Ile Val Leu Glu Leu Lys 90 983 Gly Ser Glu Thr Thr Phe Met Cys Glu Tyr Ala Asp Glu Thr Ala Thr

RAW SEQUENCE LISTING

DATE: 05/17/2006

PATENT APPLICATION: US/10/578,590

TIME: 10:16:54

Input Set : A:\sequence listing.txt

Output Set: N:\CRF4\05172006\J578590.raw

984 100 105 110

985 Ile Val Glu Phe Leu Asn Arg Trp Ile Thr Phe Ser Gln Ser Ile Ile

115 120 125

987 Ser Thr Leu Thr

988 130

B--> 990(15

VERIFICATION SUMMARYDATE: 05/17/2006PATENT APPLICATION: US/10/578,590TIME: 10:16:55

Input Set : A:\sequence listing.txt
Output Set: N:\CRF4\05172006\J578590.raw

L:16 M:270 C: Current Application Number differs, Replaced Current Application No L:16 M:271 C: Current Filing Date differs, Replaced Current Filing Date L:39 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order! L:42 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:1 L:534 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:9 L:635 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:11 L:766 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:13 L:849 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:15 L:921 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order! L:924 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:17 L:990 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:18